

January 2025

In our latest edition of NENSC News, the <u>Nuclear Energy and National Security Coalition (NENSC)</u> brings you the latest industry news, events you don't want to miss, and policies we are watching. Be sure to keep scrolling to learn how you can follow us and stay up to date with the latest information you need.

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LEAD STORY

NENSC Hosts Webinar on Perspectives on the Nuclear Regulatory Commission's Role in Addressing the Growing Demand for Nuclear Energy

On January 14th, NENSC's hosted a webinar on "Perspectives on the Nuclear Regulatory Commission's Role in Addressing the Growing Demand for Nuclear Energy," during which **Richard Meserve**, former Chairman of the Nuclear Regulatory Commission (NRC), and **Daniel Poneman**, former Deputy Secretary of Energy, offered their perspectives on the increasing need for domestic and global nuclear energy. The event highlighted key areas of consideration for the NRC, including its licensing review processes and its role in fostering international cooperation. Meserve is a member of the NENSC Expert Council and Poneman serves as a Co-Chair of NENSC.



NENSC Webina: Per actives on the Nuclear Regulatory Con miss as Role in Addressing the Growing Den and for Nuclear Energy

January 14, 2025

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U.S. LEGISLATIVE AND REGULATORY DEVELOPMENTS

Presidential Transition

Presidential Executive Orders. During his first week in office President Donald Trump signed **dozens of executive orders**, several of which focused on energy policy. For civil nuclear energy, the most impactful and beneficial ones are:

- Unleashing American Energy: This EO directs the heads of all federal agencies to review federal actions that burden the development of domestic energy resources "with particular attention to oil, natural gas, coal, hydropower, biofuels, critical mineral, and nuclear energy resources." It also directs the Secretary of the Interior to direct the USGS "to consider updating the Survey's list of critical minerals, including for the potential of including uranium." Further it works to improve the federal permitting process by all federal agencies to "undertake all available efforts to eliminate all delays within their respective permitting processes" and "provide greater certainty in the Federal permitting process, including, but not limited to, streamlining the judicial review of the application of NEPA." The EO also pauses the disbursement of funds appropriated through the Inflation Reduction Act and the Infrastructure Investment and Jobs Act, which OMB followed by releasing additional guidance narrowing the scope to funding focused on climate change mitigation and electric vehicle charging.
- <u>Declaring a National Energy Emergency</u>: This EO directs all federal agencies to "use any lawful emergency authorities available to them, as well as all other lawful authorities they may possess, to facilitate the identification, leasing, siting, production, transportation, refining, and generation of domestic energy resources, including, but not limited to, on Federal lands."

David Wright Named Chairman of the NRC: President Trump designated David Wright as Chairman of the NRC, replacing Chris Hanson, who reverted back to a Commissioner. Wright has been serving as an NRC Commissioner since May 30, 2018, with his current term set to expire on June 30, 2025. Prior to his tenure at the NRC, Wright was the Owner and President of Wright Directions, LLC, a strategic consulting firm specializing in energy and water policy. He also held significant roles, such as a member of the Advisory Council of the Bipartisan Policy Center's Nuclear Waste Initiative and Chairman Emeritus of the Nuclear Waste Strategy Coalition. The Nuclear Innovation Alliance released a statement expressing confidence in Wright's leadership as the new NRC Chairman.

Chris Wright Approved by Senate Energy and Natural Resources Committee: Chris Wright, President Trump's <u>nominee</u> for Secretary of Energy, was voted favorably out of the Senate Energy and Natural Resources Committee with bipartisan support by a vote of 15 to 5. Senators Wyden (D-OR), Hirono (D-HI), Cantell (D-WA), Cortez Masto (D-NV), and Padilla (D-CA) voted no. A full Senate vote is expected by the end of this month.

Doug Burgam Approved by Senate Energy and Natural and Resources Committee: Former Governor Doug Burgum, President Trump's **nominee** for Secretary of the Interior and head of the National Energy Council, was voted favorably out of the Senate Energy and Natural Resources Committee with bipartisan support by a vote of 18 to 2. Senators Wyden (D-OR) and Hirono (D-HI) voted no. A full Senate vote is expected by the end of this month.

Griffith for Under Secretary of Energy: President Trump <u>selected</u> Wells Griffith to be nominated for the Under Secretary of Energy at the Department of Energy. During Trump's first Administration, Griffith served as Senior Advisor to the CEO of the U.S. International Development Finance Corporation, Senior Director for Energy and Environment on the National Security Council, as well as Acting Assistant Secretary for International Affairs at the Department of Energy.

Former Congressman Williams for Administrator of NNSA: President Trump selected former Congressman Brandon Williams to be nominated for the Under Secretary for Nuclear Security and the Administrator of the National Nuclear Security Administration. Last year, while in Congress, Rep. Williams (R-NY) introduced the "Milestones for Advanced Nuclear Fuel Act". Co-sponsored by Rep. Sorenson (D-IL), the bill directed DOE to award milestone-based projects across the domestic nuclear fuel supply chain, including uranium production, conversion, fabrication, enrichment, deconversion, and recycling. The text of the bill is here, and a fact sheet on the bill is here. The bill passed favorably out of the House Committee on Science, Space, and Technology but was never given a full floor vote.

Gil for Under Secretary of Science and Innovation: President Trump <u>selected</u> Dr. Darío Gil to be nominated for the Under Secretary for Science and Innovation at the Department of Energy. Darío is an elected member of the National Academy of Engineering and received his Ph.D. in Electrical Engineering and Computer Science from MIT. During Trump's first Administration, Dr. Gil served on the Presidential Council of Advisors for Science and Technology.

Organization of the National Security Council: President Trump <u>released a memorandum</u> outlining how his National Security Council will be structured. As in previous Administrations, the

Secretary of Energy maintains a seat on the National Security Council, and the Deputy Secretary of Energy maintains a seat on the Deputies Committee.

NRC Updates Mission Statement: As directed by the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2023 (ADVANCE Act), the Nuclear Regulatory Commission (NRC) approved updating the agency's mission statement. The new mission statement is as follows:

"The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment."

Other Domestic Developments

Yucca Mountain Consent Bills Reintroduced: Reps. Dina Titus (D-NV), Susie Lee (D-NV), and Steven Horsford (D-NV) <u>reintroduced</u> the "Nuclear Waste Informed Consent Act," which would require state, local, and tribal governments to provide consent before the construction of a permanent nuclear waste repository at Yucca Mountain. Senators Catherine Cortex Masto (D-NV) and Jacky Rosen (D-NV) also <u>reintroduced</u> companion legislation in the Senate.

House Zaporizhzhia Bill Reintroduced: Rep. Gregory Meeks (D-NY), Ranking Member of the House Foreign Affairs Committee, <u>reintroduced</u> the "Sanction Russian Nuclear Safety Violators Act of 2025". **The bill** proposes to impose sanctions on anyone endangering the integrity or safety of the Zaporzhzhia nuclear power plant in Ukraine.

USA and Thailand Sign 123 Agreement: The United States and Thailand <u>have signed</u> a new civil nuclear cooperation agreement, known as a "123 Agreement". This agreement establishes a framework for collaboration on the peaceful uses of nuclear energy, with a focus on advancing nonproliferation, safety, and clean energy development. It also reinforces the commitment of both nations to work together to address global energy and environmental challenges.

Biden Administration Releases Executive Order on Al Infrastructure: On January 14, the Biden Administration issued an Executive Order to enhance U.S. leadership in Al infrastructure, promoting national security, economic competitiveness, and the clean energy transition. Key provisions include encouraging efforts for federal agencies to align with the U.S. Nuclear Energy Deployment Framework, focusing on building new reactors, improving licensing, and developing the nuclear workforce. It directs the DoD and DOE to identify high-priority sites for nuclear power deployment by 2035 to support Al data center electricity demand. Additionally, the order mandates a plan for international collaboration on SMR commercialization, with a focus on U.S. exports of advanced nuclear technologies and services to global allies.

Final Rules Expand Nuclear Eligibility for Clean Hydrogen Tax Credit: The U.S. Treasury and the Internal Revenue Service have <u>clarified the eligibility of nuclear power plants</u> for the 45V Clean Hydrogen Production Tax Credit, established under the Inflation Reduction Act of 2022. This credit incentivizes clean hydrogen production, with up to \$3.00/kg for hydrogen produced using clean electricity. Nuclear plants can qualify if they face retirement risks, have

recently shut down and are cleared to restart or undergo power uprates. Additionally, reactors in states with robust emissions caps and clean electricity standards may also qualify. These provisions support nuclear's role in producing clean hydrogen for industries like oil refining and fertilizer production, contributing to emissions reduction and energy transition goals.

INTERNATIONAL NUCLEAR DEVELOPMENTS

Italy Plans for New Nuclear: Italy <u>plans to finalize</u> a strategy for reintroducing nuclear power by the end of 2027, according to Energy Minister Gilberto Pichetto Fratin. The government is drafting legislation to lift the nearly 40-year ban on nuclear energy, aiming to incorporate advanced reactor technologies, such as small modular reactors, to complement renewable energy sources and decarbonize key industries.

KHNP Partners with Scandinavian Firms for SMR Development: KHNP has <u>signed MOUs</u> with Norsk Kjernekraft (Norway) and Kärnfull Next (Sweden) to collaborate on the development of SMRs. These agreements focus on feasibility studies, site selection, and the development of Smart Net-zero City models. KHNP aims to expand its presence in the European SMR market by advancing energy independence and carbon neutrality. The i-SMR technology, which is faster and more cost effective than traditional reactors, is set to be deployed in multiple regions, including Indonesia and Jordan.

European MEPs Advocate for Prioritizing European Projects in SMR Alliance: In a letter addressed to the EU Commission on January 22, four Members of the European Parliament (MEPs) called for a stronger emphasis on European projects within the newly-formed SMR alliance. Last October, the alliance endorsed nine nuclear projects for EU development support, including the NuScale VOYGR SMR. The MEPs have raised concerns, arguing that EU-backed SMRs should feature European designs rather than non-European ones.

Saudi Arabia Plans to Enrich Uranium: Saudi Arabia intends to enrich uranium and sell it as part of its broader energy strategy, according to Energy Minister Prince Abdulaziz bin Salman. While Saudi Arabia's nuclear program is still in its early stages, it aims to diversify its energy sources, potentially expanding into uranium enrichment, which is a sensitive area due to its connection to nuclear weapons. This move comes amid growing concerns about regional rivalries, especially with Iran.

Vietnam and Russia Sign Nuclear Cooperation Agreement: Vietnam and Russia have **signed a cooperation agreement to** revive Vietnam's nuclear power program nearly a decade after its suspension. The partnership focuses on advancing nuclear energy development to meet Vietnam's growing energy needs.

Sweden Begins Construction Of Final Repository: Sweden has <u>commenced construction</u> of a deep geological repository for spent nuclear fuel at Forsmark, designed to securely store highly radioactive waste for 100,000 years. The project includes building approximately 60 kilometers of tunnels, 500 meters underground, to house over 6,000 copper-encased canisters of spent fuel, with completion expected around the 2080s.

Siemens Faces Legal Dispute with Rosatom Over Nuclear Equipment Delays: Rosatom is considering legal action against Siemens Energy over delays in delivering critical equipment for the Akkuyu nuclear power plant in Turkey. Siemens Energy was contracted to supply gasinsulated equipment for the plant's power distribution system, but export permissions from Germany's Federal Office for Economic Affairs and Export Control (BAFA) delayed the delivery. While the necessary permits have now been granted, Rosatom has reportedly sourced alternative components from China and could seek compensation for losses caused by the delays. Siemens Energy emphasizes its adherence to local regulations and sanctions, stating it only fulfills pre-war contracts with Russia.

Major Chinese Nuclear Operators Report 2024 Output: China General Nuclear (CGN) reported a 6% increase in nuclear electricity output for 2024, with a total of 242.2 TWh generated, while China National Nuclear Corporation (CNNC) saw a 1.8% decrease, mainly due to reactors undergoing maintenance. As of December 2024, CGN operated 28 reactors with a combined capacity of 31,798 MWe, while CNNC controlled 25 reactors with an installed capacity of 23.75 GWe. Both companies are actively expanding, with CGN managing 16 reactors under construction and CNNC planning to generate 195.4 TWh in 2025. China's nuclear fleet supplies about 5% of the country's electricity.

France "Far from Ready" to Build Six New Nuclear Reactors, Auditor Says: France's top audit body reported that the country is "far from ready" to build six new nuclear reactors, a key part of President Macron's plan announced in 2022. The project, estimated to cost up to €67.4 billion, faces significant challenges, including financing uncertainty and supply chain readiness. Construction is scheduled to begin in 2027, but risks remain, with the Court of Auditors warning that delays and lack of clarity could lead to failure. EDF, the state-owned utility overseeing the project, plans to make a final investment decision by early 2026. Meanwhile, EDF also faces increased costs at the Hinkley Point and Sizewell C projects in the UK.

U.S. Launches SMR Simulator in Ghana to Advance Nuclear Workforce: The U.S. Ambassador to Ghana, Virginia E. Palmer, joined Ghanaian officials and stakeholders to Launch Sub-Saharan Africa's first NuScale Power Energy Exploration (E2) Center in Accra. The facility, supported by the U.S. FIRST program, features an SMR control room simulator for training future African nuclear professionals. The initiative, part of a broader SMR Regional Training Hub, includes academic partnerships, curricula development, and a nuclear welding certification program.

Ontario Unveils Plans for Massive Nuclear Power Project in Port Hope: Ontario announced plans for a large-scale nuclear power plant near Port Hope, which is projected to generate 10,000 megawatts of electricity and create 10,500 jobs. The \$235 billion project aims to meet rising energy demands and position Ontario as a global nuclear leader. The project will undergo extensive environmental assessments, with construction expected to begin in the 2030s and operations in the 2040s. Local and First Nations communities are engaging in early discussions about its feasibility and impact.

Russia's Floating Nuclear Power Plant Reaches Milestone: The world's only operational floating nuclear power plant (FNPP), located in Pevek, Chukotka Autonomous Okrug, Russia, has generated its first billion kilowatt-hours of electricity for the isolated Chaun-Bilibino energy hub. Currently, the FNPP supplies over 60% of the electricity in this region, marking a significant milestone as it approaches its fifth anniversary in May 2025.

Rosatom Developing Fuel for HTGRs: Rosatom has-developed a pilot commercial technology for producing fuel for high-temperature gas-cooled reactors. The technology utilizes domestically produced equipment and has demonstrated the ability to contain gaseous fission products at temperatures up to 1600°C, ensuring safety even during operational disruptions. The pilot facility, capable of producing 250,000 fuel compacts annually, is a significant step toward constructing a pilot nuclear power engineering plant with HTGR and chemical processing capabilities, contributing to advancements in hydrogen-based products and ammonia production.

IN THE NEWS

PV Magazine: <u>US Government Nuclear Sites Going Solar</u>

DOE Office of Nuclear Energy: 11 Big Wins for Nuclear Energy in 2024

GREENWIRE: Constellation Energy, GSA Ink Largest-Ever Federal Nuclear Deal

[Paywall]

IAEA: Nuclear Human Resource Development for a Net Zero Future

Photonics: German Initiative Aims to Develop, Scale Inertial Fusion Targets

WSJ: A Lawless NRC Obstructs Safe Nuclear Power [Opinion]

MIT: The Multi-Faceted Challenge of Powering Al

ClearPath: The Rundown

Technology Review: What's Next for Nuclear Power

DOE: 5 Nuclear Energy Stories to Watch in 2025

IEA: The Path to a New Era for Nuclear Energy [Report]

World Nuclear News: US Companies Join Forces to Accelerate SMR Deployment

E&E: Trump's NRC Chair Takes Center Stage for Nuclear's Star Turn [Paywall]

World Nuclear News: Industry Scaling Up to Deliver Nuclear Expansion, WEF Hears

Utility Dive: Advanced Reactors, Interstate Cooperation Part of New York's Nuclear

Future: Gov. Hochul

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